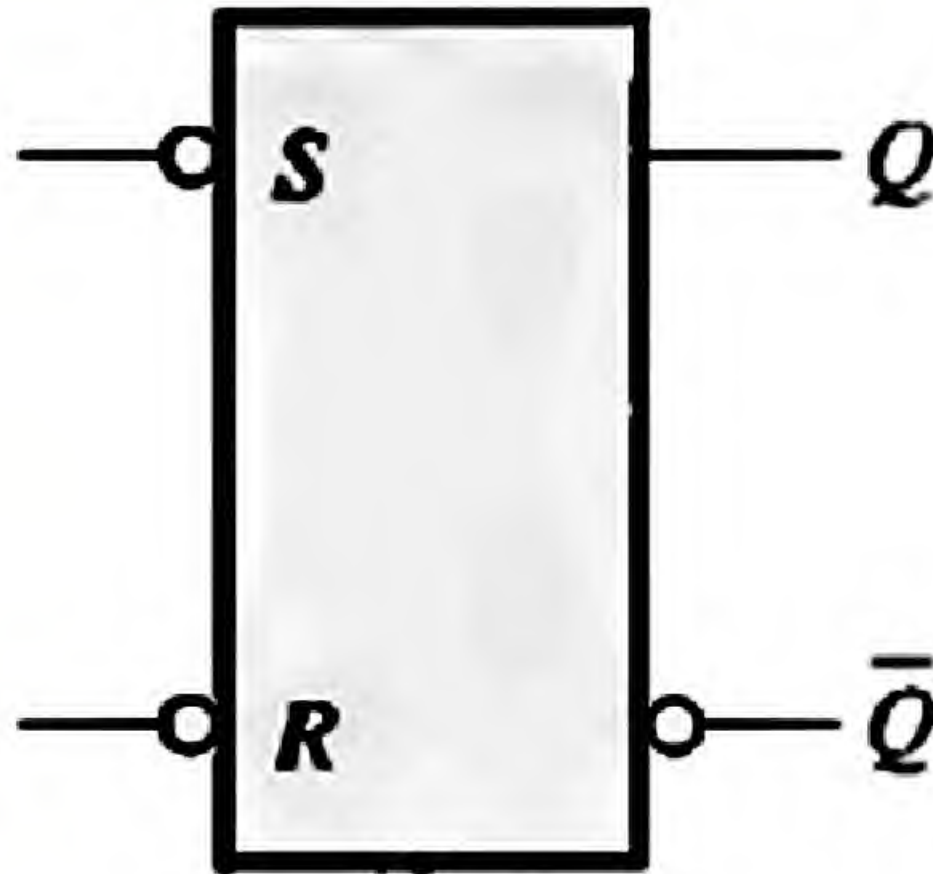


Q1: If the waveforms in Figure 1 are applied to an **active-LOW** input S-R latch, **draw** the resulting Q output waveform in relation to the inputs. **Assume** that Q starts **LOW**.



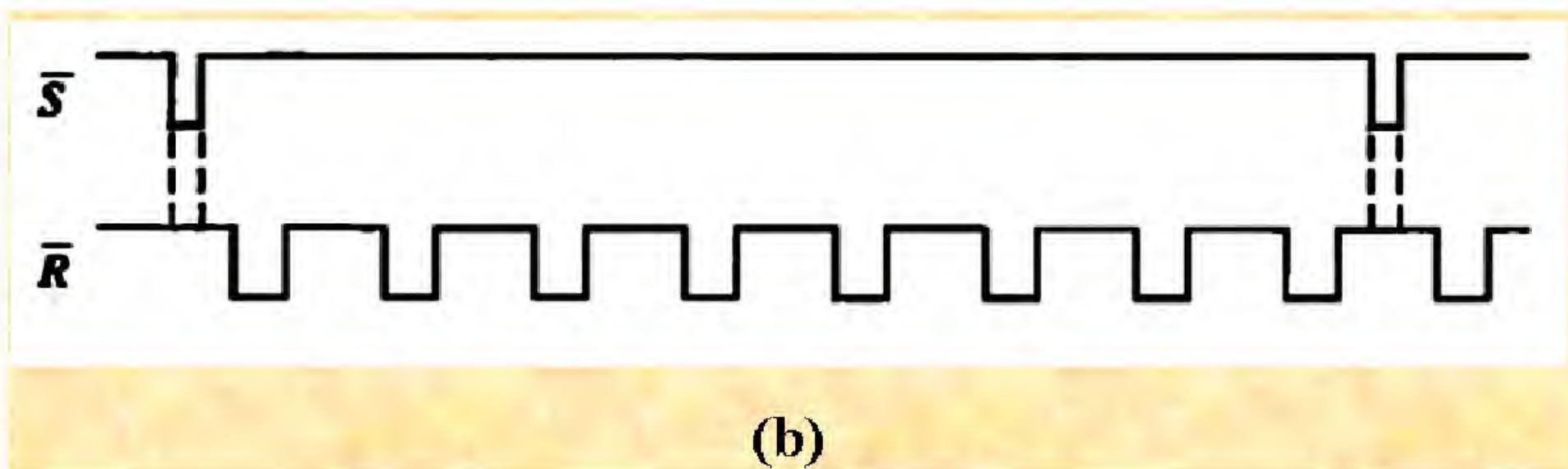
\bar{S}



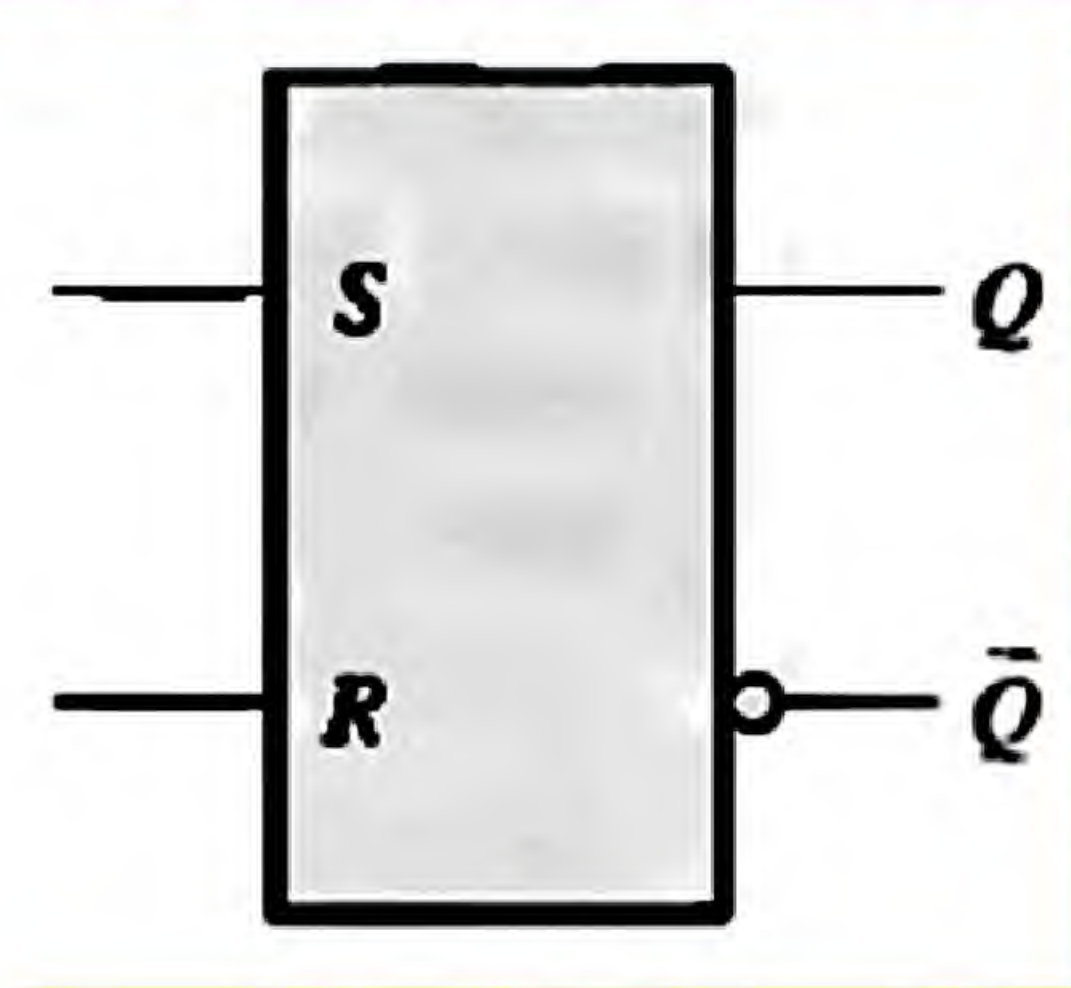
\bar{R}

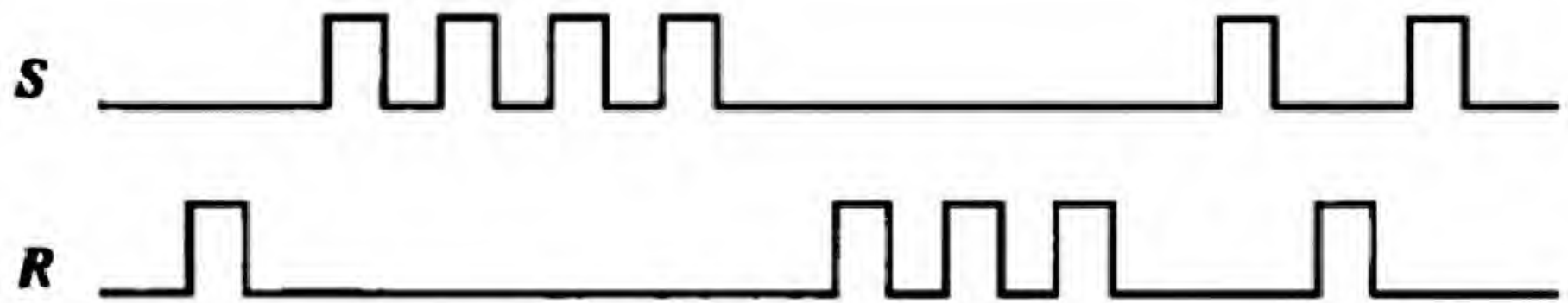


(a)

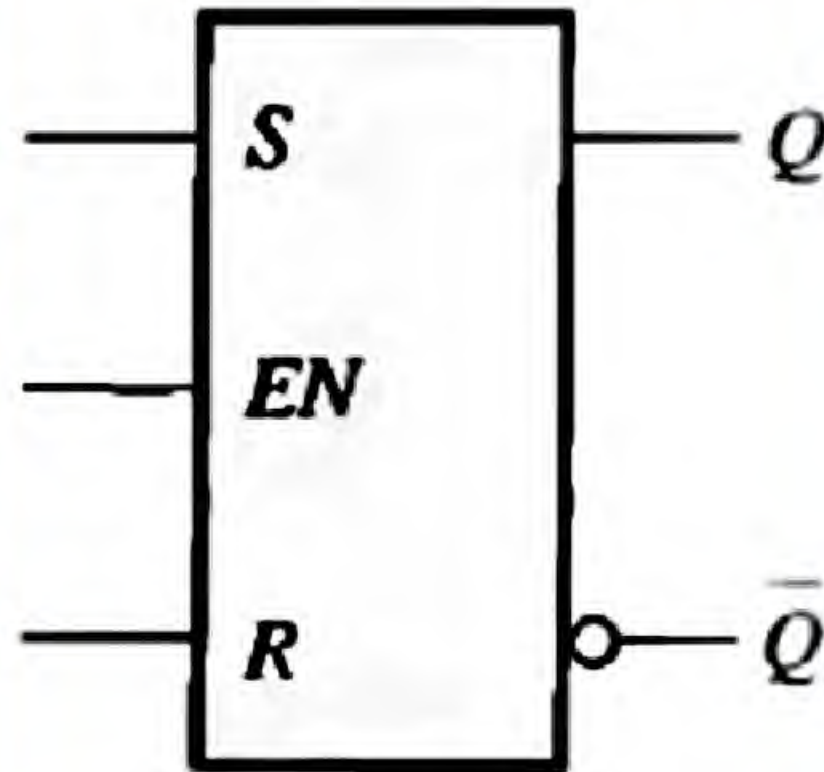


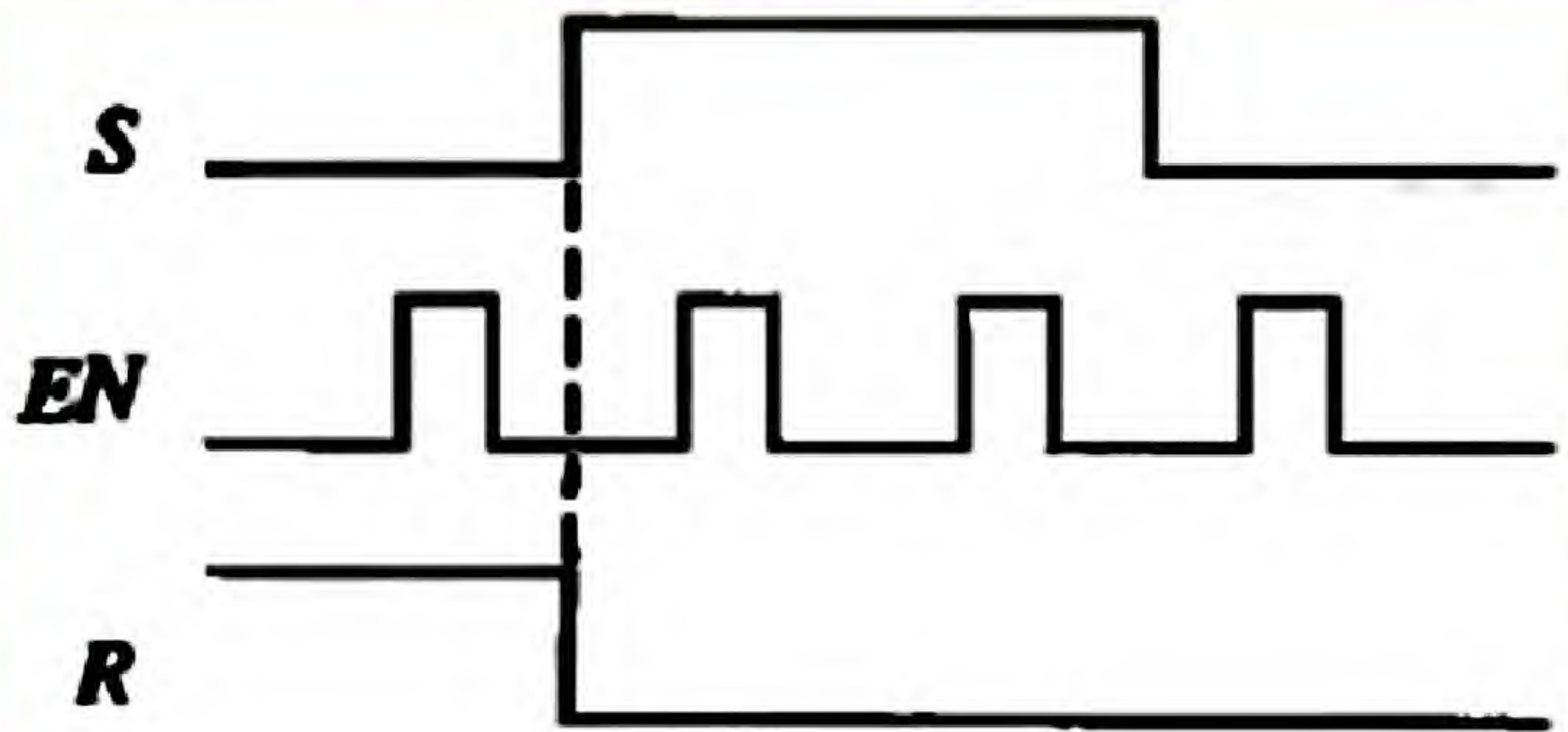
Q2: If the waveforms in Figure 2 are applied to an active-High input S-R latch, draw the resulting Q output waveform in relation to the inputs. Assume that Q starts LOW.





Q3: For a gated S-R latch, determine the Q and \bar{Q} outputs for the inputs in Figure 3. Show them in proper relation to the enable input. Assume that Q starts LOW.





Q4: For a gated D latch. the waveforms shown in Figure 4 are observed on its inputs. Draw the timing diagram showing the output waveform you would expect to see at Q if the latch is initially RESET.

